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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,602	10/24/2003	Charlene W. Bayer	163.1773USU1	6490

6980 7590 06/19/2006

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EXAMINER

DRODGE, JOSEPH W

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/693,602	Applicant(s) BAYER ET AL.	
	Examiner Joseph W. Drodge	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-12,15-18,20-22,24 and 33-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-12,15-18,20-22,24 and 33-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0105</u> . | 6) <input type="checkbox"/> Other: _____ |

Claims 7-10, 16, 38 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Water is listed as both a reactive additive in claims 7-9, 38 and 39 and as a non-reactive additive for claim 16 creating a conflict.

Claims 7-10 improperly depend from canceled claim 6.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Jaffe et al disclose method and apparatus comprising a gas filter (paragraph or "p" 5), polymer matrix p10, 35 and reactive additive p12, 15. The filter has a high absorption capacity p42, 45, 47. It is unclear if the capacity exceeds the instantly claimed capacity of exceeding 0.01 gram of captured contaminants per gram of absorptive system. Jaffe et al and Kishovich et al commonly teach absorption filters used as pressure swing absorption devices. Kishovich teach an extremely high capacity of a pressure swing device comprising polymeric material impregnated with reactive additives (p60). It would have been obvious to one of ordinary skill in the art to have manufactured the Jaffe et al device to have the now claimed absorption capacity, as taught by Kishovich et al, in order to generate uncontaminated air of high quality suitable for precision industrial environments such as manufacture of semiconductors (Kishovich p2 and Jaffe p5).

Jaffe also discloses the following per dependent claims: suggestion of the matrix being highly dispersed or diffused (p45, 47) for claims 2-4 and 36, and of polyethylene

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and polypropylene co-polymer (p39) for claim 3, the additives containing water and catalytic or stoichiometric amounts of metals or varied other substances, including organic or inorganic acids, nanoparticles and amines for claims 5,7-10,16 and 37-40 (Jaffe claim 8 and p9,14 & 36), there being non-reactive additives for claims 15,16 and 41(p41), the additives either being distributed or in a layer(s) for claims 11 and 12 (p11,12), there optionally being a substrate for claims 18,20,21 and 42-44 (figure 6, and p13,64), or a housing for claims 22,24 and 45 (p22) and air being filtered (p5) for claim 34.

Kishovich further teaches the substrate being a non-woven polymeric material for claims 20,21,43 and 44 (p 48).

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3,5,7-12,15,16,18,20-22,24,34-36 and 38-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaffe et al PG PUBS Document US2004/0118287 in view of Kishovich et al PG PUBS Document 2002/0178923.

Jaffe et al disclose method and apparatus comprising a gas filter (paragraph or "p" 5), polymer matrix p10,35 and reactive additive p12,15. The filter has a high absorption capacity p42,45,47. It is unclear if the capacity exceeds the instantly claimed capacity of exceeding 0.01 gram of captured contaminants per gram of absorptive system. Jaffe et al and Kishovich et al commonly teach absorption filters used as pressure swing absorption devices. Kishovich teach an extremely high capacity of a pressures swing device comprising polymeric material impregnated with reactive additives (p60). It would have been obvious to one of ordinary skill in the art to have manufactured the Jaffe et al device to have the now claimed absorption capacity, as taught by Kishovich et al, in order to generate uncontaminated air of high quality suitable for precision industrial environments such as manufacture of semiconductors (Kishovich p2 and Jaffe p5).

Jaffe also discloses the following per dependent claims: suggestion of the matrix being highly dispersed or diffused (p45,47) for claims 2-4 and 36, and of polyethylene

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and polypropylene co-polymer (p39) for claim 3, the additives containing water and catalytic or stoichiometric amounts of metals or varied other substances, including organic or inorganic acids, nanoparticles and amines for claims 5,7-10,16 and 37-40 (Jaffe claim 8 and p9,14 & 36), there being non-reactive additives for claims 15,16 and 41(p41), the additives either being distributed or in a layer(s) for claims 11 and 12 (p11,12), there optionally being a substrate for claims 18,20,21 and 42-44 (figure 6, and p13,64), or a housing for claims 22,24 and 45 (p22) and air being filtered (p5) for claim 34.

Kishovich further teaches the substrate being a non-woven polymeric material for claims 20,21,43 and 44 (p 48).

Claims 4,17,33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaffe et al PGPUBS Document US2004/0118287 in view of Kishovich et al PGPUBS Document 2002/0178923 as applied to claims 1,24 and 35 above, and further in view of Koslow PGPUBS Document US2003/0140785. Claims 4,17 and 37 differ in requiring polymeric matrix to comprise polyacrylamide while claim 33 requires the structure being effective as a "biostat". However, it would have been obvious to one of ordinary skill in the art to have utilized polyacrylamide in the Jaffe structure, since Koslow teaches at p50-52 that such polymer is among a list of useful polymers for reactive additive-containing polymeric gas or liquid absorption devices.

For claim 33, it would have been obvious to have applied the Jaffe et al device as a biostat, since Koslow teaches at p22,32, etc. that absorption devices are readily adapted to capture biological contaminants.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Heskett et al patent 3,538,020 is of general interest as disclosing a gas filter comprising polymer matrix impregnated with additives.

Applicant's arguments with respect to claims 1-5,7-12,15-18,20-22,24 and 33-45 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from

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the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at 571-272-1151. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

June 15, 2006


JOSEPH DRODGE
PRIMARY EXAMINER